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PATENT APPLICATION
Docket No.: 13768.69.1.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:)
)
    Sanjay Anand, et al.)
)
Serial No.:   09/726,082   ) Art Unit
) Unknown
Filed: November 29, 2000   )
)
For: METHOD AND COMPUTER PROGRAM PRODUCT   )
        FOR OFFLOADING PROCESSING TASKS FROM   )
        SOFTWARE TO HARDWARE   )
)
Examiner: Unknown   )

AMENDMENT "A"

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

In response to the Notice to File Corrected Application Papers, a copy of which is attached, please amend the above-identified application as follows:

IN THE ABSTRACT OF THE DISCLOSURE

Please delete the section of the specification entitled "ABSTRACT OF THE DISCLOSURE" and replace the deleted section by the ABSTRACT OF THE DISCLOSURE provided herewith on a separate sheet in accordance with 37 C.F.R. 1.72(b).

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REMARKS

These remarks and the accompanying amendments are in response to the Notice to File

Corrected Application Papers mailed February 14, 2001 (hereinafter referred to as "the Notice").

The Notice required an abstract not to exceed 150 words in length, commencing on a separate

sheet. Accordingly, attached herewith is a separate sheet titled simply "ABSTRACT OF THE

DISCLOSURE" in clean form in accordance with 37 C.F.R. 1.121. Also attached herewith is a

separate sheet titled "VERSION MARKED UP TO SHOW CHANGES" which shows additions

to the previous abstract using underlined text, and which shows deletions in strikeout text. The

Examiner is invited to contact the undersigned should there be any further concern about the

Abstract of the Disclosure.

Dated this 16th day of March, 2001.

Respectfully submitted,

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ABSTRACT OF THE DISCLOSURE

~~The present invention is directed to a method and computer program product for~~ oOffloading specific processing tasks that would otherwise be performed in a computer system's processor and memory, to a peripheral device~~, or devices, that are connected to the computer~~. The computing task is then performed by the peripheral, thereby saving computer system resources for other computing tasks~~ and increasing the overall computing efficiency of the computer system~~. In one preferred embodiment, the disclosed method is utilized in a layered network model, wherein computing tasks that are typically performed in network applications are instead offloaded to the network interface card (NIC) peripheral. ~~An application executing on the computer system first queries the processing, or task offload capabilities of the NIC, and then selectively enables those capabilities that may be subsequently needed by the application. The specific processing capabilities of a NIC are made available by creating a task offload buffer data structure, which contains data indicative of the processing capabilities of the corresponding NIC. Once an application has discerned the capabilities of a particular NIC, it will selectively utilize any of the enabled task offload capabilities of the NIC by appending packet extension data to the network data packet that is forwarded to the NIC. The device driver of the NIC will review the data contained in the packet extension, and then cause the NIC to perform the specified operating task(s). This offloading of computing tasks on a per-packet basis allows an application to selectively offload tasks on a dynamic, as-needed basis. As such, applications executing on the computer system processor are able to offload tasks in instances where it is busy processing other computing tasks and processor overhead is high. Multiple tasks can also be offloaded in batches to a particular peripheral.~~

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